

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,843,787 B2
DATED : January 18, 2005
INVENTOR(S) : Luis Antonio Ruiz

Page 1 of 6


It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The title page, showing an illustrative figure, should be deleted and substitute therefore the attached title page.

Delete drawing sheets 4 of 7, 5 of 7, 6 of 7 and 7 of 7, and substitute therefore the drawing sheets, consisting of FIGS. 4-7, as shown on the attached pages.

Signed and Sealed this

Twenty-third Day of August, 2005

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looped initial "J" and a distinct "D".

JON W. DUDAS
Director of the United States Patent and Trademark Office

(12) **United States Patent**
Ruiz

(10) Patent No.: **US 6,843,787 B2**
(45) Date of Patent: ***Jan. 18, 2005**

(54) **APPARATUS AND METHOD FOR PERFORMING PRESBYOPIA CORRECTIVE SURGERY**

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(*) Notice: **Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/944,102**

(22) Filed: **Sep. 4, 2001**

(65) **Prior Publication Data**

US 2002/0055735 A1 May 9, 2002

Related U.S. Application Data

(63) Continuation of application No. 09/186,884, filed on Nov. 6, 1998, now Pat. No. 6,302,877, which is a continuation-in-part of application No. 08/660,376, filed on Jun. 7, 1996, now Pat. No. 5,928,129, which is a continuation-in-part of application No. 08/268,182, filed on Jun. 29, 1994, now Pat. No. 5,533,997.

(51) Int. Cl.⁷ **A61F 9/007**

(52) U.S. Cl. **606/5; 606/10**

(58) Field of Search **606/5, 10, 13, 606/17, 18; 351/161; 623/6.28**

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,173,980 A 11/1979 Curtin
4,461,294 A 7/1984 Baron
4,660,556 A 4/1987 Swinger et al.
4,662,370 A 5/1987 Hoffmann et al.
4,665,914 A 5/1987 Tanne
4,674,503 A 6/1987 Peyman et al.

4,688,570 A 8/1987 Kramer et al.
4,705,035 A 11/1987 Givens
4,718,418 A 1/1988 L'Esperance, Jr.

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

EP A-346116 12/1989
EP A-402250 12/1990
EP 0 417 952 3/1991
JP 3-155491 7/1991
JP 3-94750 4/1992
JP 6-181944 7/1994
WO 94/01067 1/1994

OTHER PUBLICATIONS

Lasers in Surgery Medicine, vol. 10, No. 5, Jan. 1, 1990, pp. 463-468, XP 000385912, Pallikaris: "Laser In-Situ Keratomileusis".

Steinway Instrument Co., The Steinway/Barraguer In-Situ Microkeratome Set, from the Steinway Instrument Co. of San Diego, California.

Surgery for Hyperopia & Presbyopia, by Neal A. Sher, M.D., F.A.C.S., *Williams & Wilkins*, 1997 (entire book submitted).

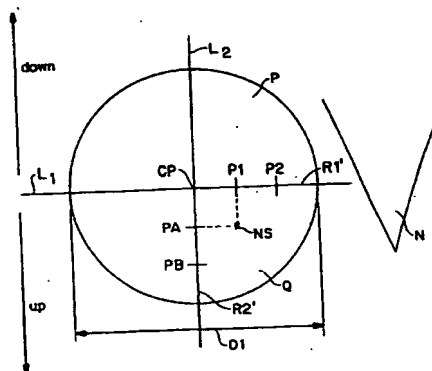
Primary Examiner—David M. Shay

(74) *Attorney, Agent, or Firm*—Smith, Gambrell & Russell, LLP

(57) **ABSTRACT**

A process and system for addressing presbyopia of an eye is disclosed and features the resecting of an eye to expose a corneal stroma and system and method for determining an eye sculpturing center point found in a nasal-superior region of the eye. Sculpturing through use of an ablation laser is then carried out relative to the determined eye sculpturing centerpoint which sculpturing includes leaving a central optic zone unable relative to the presbyopic corrective process. Following sculpturing the resected portion of the eye is returned to cover over the sculptured region. The sculpturing profile is also formed with ablation control to define an advantageous (e.g., aspherical) ablation profile in the stroma.

28 Claims, 7 Drawing Sheets



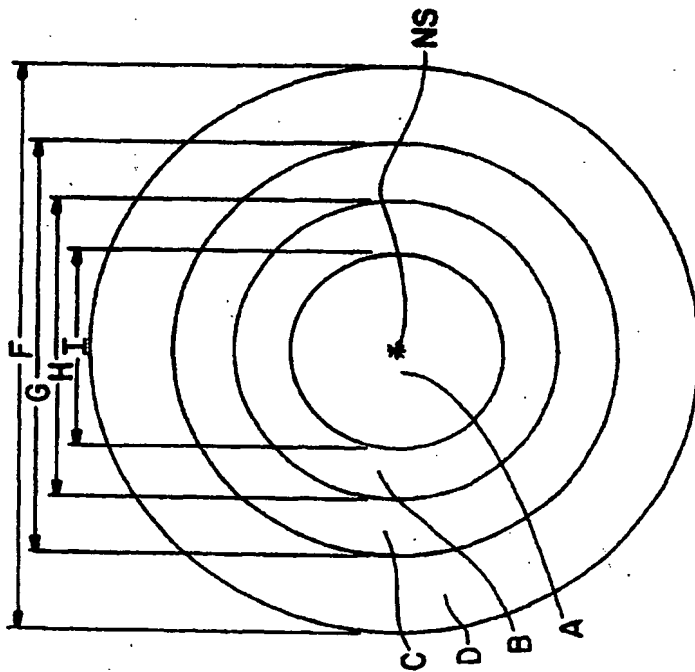


FIG. 4

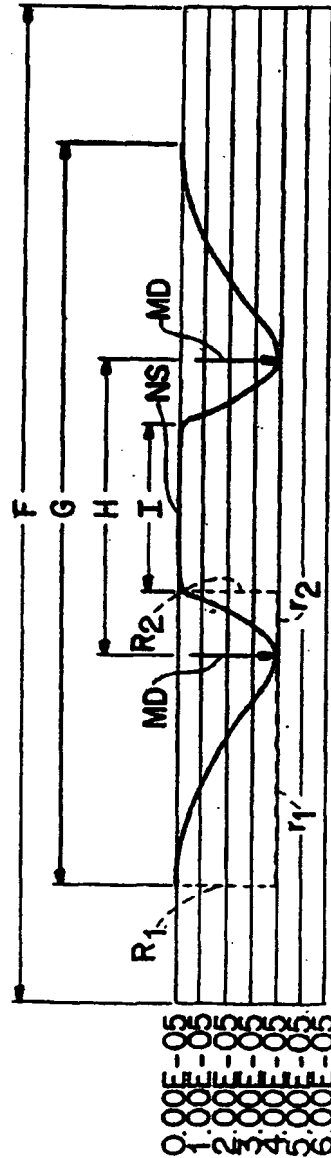


FIG. 4A

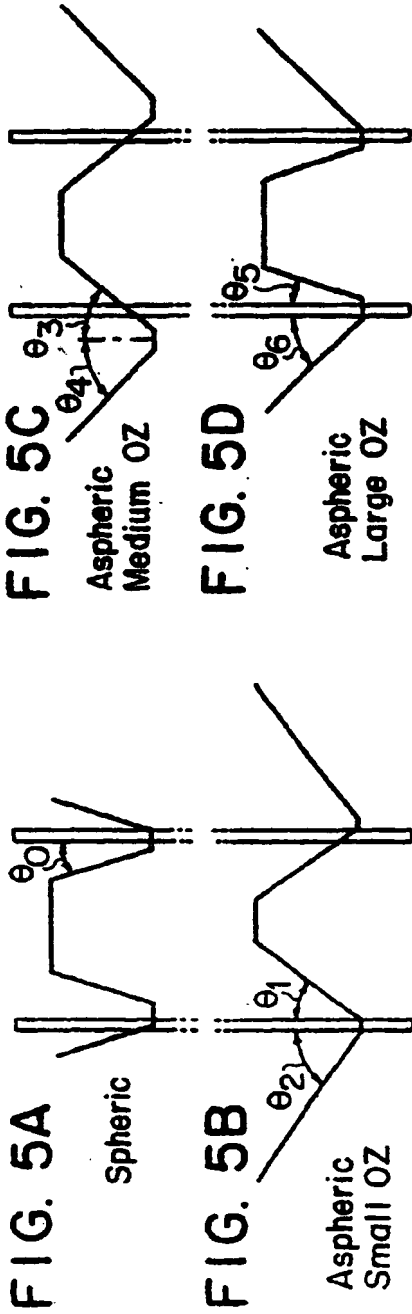


FIG. 5E

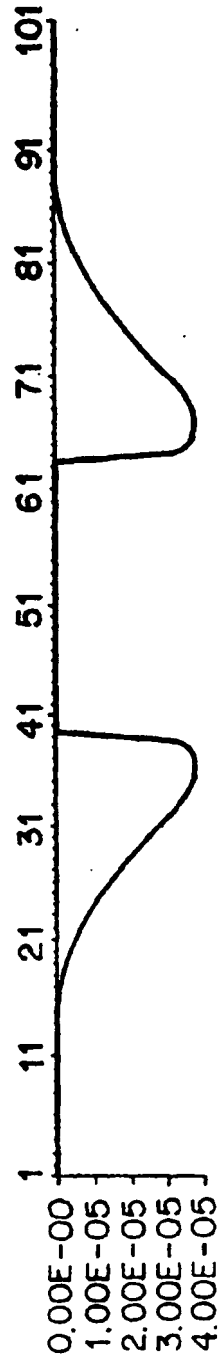


FIG. 6

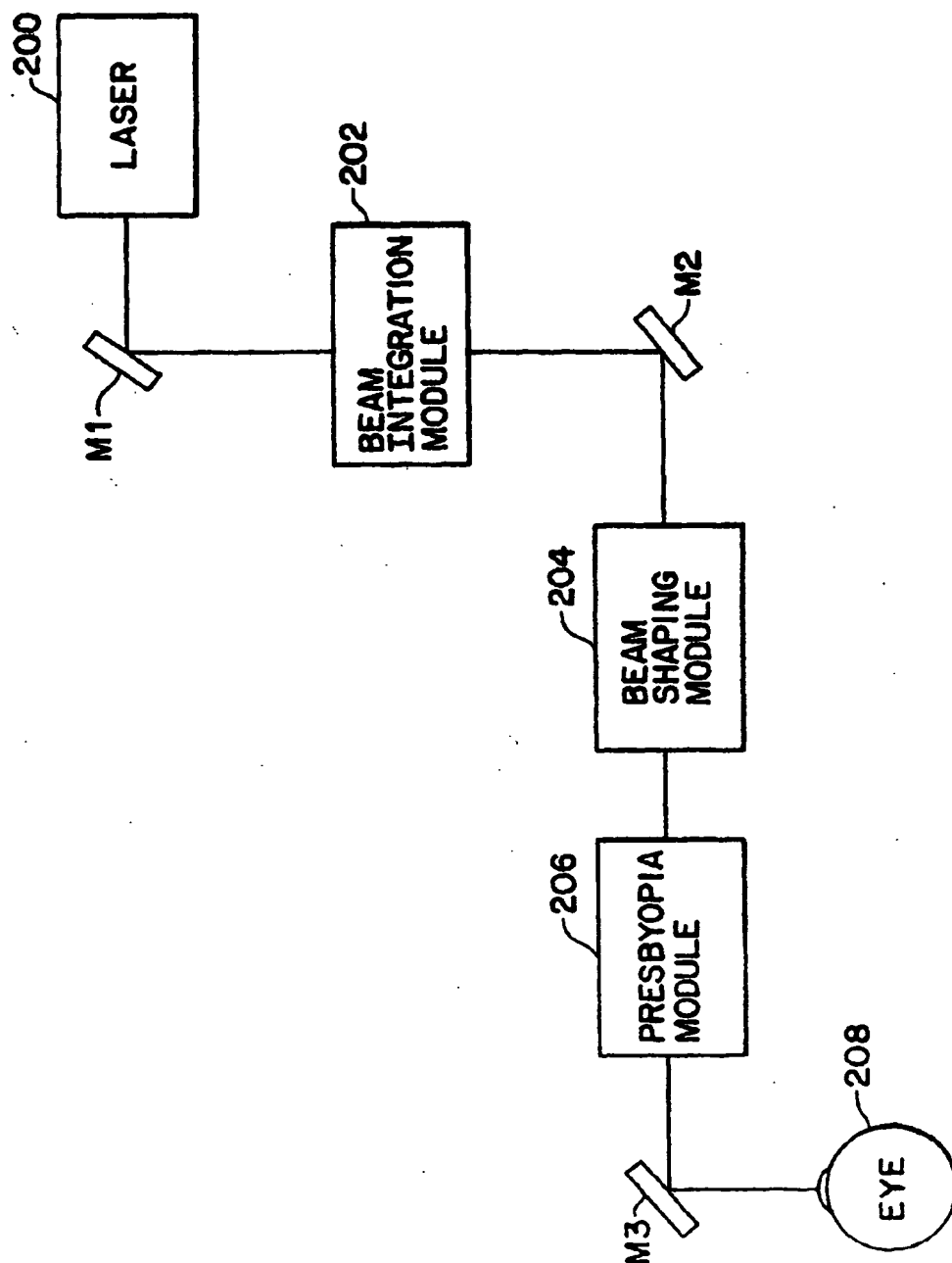


FIG. 7

